

Please amend the claims as follows.

1. (Currently amended) A system for storing at least one frame of an input signal for an amount of time before transmitting the at least one frame, the system comprising:

a buffer for storing a frame of an input signal, the buffer having a depth which is adjustable;

a clock for indicating an arrival-time of the frame received at the buffer, the frame having a timestamp denoting a playback-time;

A
a comparison module for comparing the arrival-time with the playback-time for determining whether the frame arrived on schedule, the comparison module operable to determine determining an amount of time between the arrival-time and the playback-time if the frame did not arrive on schedule; and

a buffer depth adjuster for altering the depth of the buffer responsive to the comparison module determining the frame did not arrive on schedule, wherein the depth of said buffer is altered based on the amount of time said frame did not arrive on schedule.

2. (Original) The system of Claim 1, wherein if the frame arrived late, the comparison module determines an amount of time said frame arrived late.

3. (Original) The system of Claim 2, further comprising:

a late-counter responsive to the comparison module, the late-counter stores a count of frames arriving late.

4. (Original) The system of Claim 3, wherein the buffer depth adjuster responsive to the late-counter exceeding a predetermined value, said buffer depth adjuster causing the depth of said buffer to increase.

5. (Original) The system of Claim 4, wherein the depth of the buffer increases by the amount of time determined by the comparison module, and said amount of time corresponding to a maximum amount of time which a frame within a set arrived late.

6. (Original) The system of Claim 5, wherein a length of the set is variable.

7. (Original) The system of Claim 5, wherein the depth of the buffer increases by adjusting the clock by the maximum amount of time which the frame within the set arrived late.

8. (Original) The system of Claim 1, wherein the depth of the buffer does not increase above a maximum predefined value.

9. (Original) The system of Claim 1, wherein if the frame arrived early, the comparison module determining an amount of time said frame arrived early.

10. (Original) The system of Claim 9, further comprising:

an early-counter responsive to the comparison module, the early-counter stores a count of frames arriving early.

11. (Original) The system of Claim 10, wherein the buffer depth adjuster responsive to the early-counter exceeding a predetermined value, said buffer depth adjuster causing the depth of said buffer to decrease.

12. (Original) The system of Claim 11, further comprising:

a buffer-counter for storing a count of frames stored in the buffer; and

a buffer detector unit responsive to the early-counter exceeding a predetermined value, the buffer detector unit causing the buffer depth adjuster to decrease the depth of the buffer by an amount of time dependent on the buffer-counter.

13. (Original) The system of Claim 12, wherein the depth of the buffer decreases by adjusting the clock by the amount dependent on the buffer-counter.

14. (Original) The system of Claim 1, wherein the depth of the buffer does not decrease below a minimum predefined value.

15. (Original) The system of Claim 1, further comprising:

a sequencer module for arranging the frames stored in the buffer in an order for playback.

16. (Currently amended) A system for storing at least one frame of an input signal for an amount of time before transmitting the at least one frame, the system comprising:

a buffer for storing a frame of an input signal, the buffer having a depth which is adjustable and specifies an amount of time the frame is stored in the buffer before being played;

a buffer detector unit for determining whether at least a predefined amount of frames are stored in the buffer; and

a buffer depth adjuster for altering the depth of the buffer responsive to the buffer detector unit determining a predefined amount of frames are not stored in the buffer.

17. (Currently amended) A method for increasing a depth of a multimedia buffer system, the method comprising the steps of:

receiving a frame of an input signal at an arrival-time, the frame having a timestamp indicating a playback-time;

determining whether the frame arrived late, the frame arriving late if the arrival-time is greater than the playback-time; ~~and~~

determining an amount of time the frame arrived late if the arrival-time is greater than the playback-time; and

altering the depth of the multimedia buffer system if the frame arrived late.

18. (Canceled)

19. (Currently amended) The method of Claim 17 ~~Claim 18~~, wherein depth of the multimedia buffer system is altered to increase by a maximum amount of time which a frame within a set arrived late.

20. (Original) The method of Claim 19, wherein the length of the set is variable.

21. (Original) The method of Claim 17, further comprising the step of:

providing a late-counter representing an amount of frames arriving late;

prior to performing the step of altering the depth of the multimedia buffer system, determining whether the late-counter exceeds a predetermined value; and

performing said step of altering the depth of the multimedia buffer system if the late-counter exceeds the predetermined value.

22. (Original) The method of Claim 17, further comprising the steps of:

prior to performing the step of altering the depth of the multimedia buffer system, determining whether the multimedia buffer system is at a maximum depth; and

performing the step of altering the depth of the multimedia buffer system if said system is not at the maximum depth.

23. (Currently amended) A method for decreasing a depth of a multimedia buffer system, the method comprising the steps of:

receiving a frame of an input signal at an arrival-time, the frame having a timestamp indicating a playback-time;

determining whether the frame arrived early, the frame arriving early if the arrival-time is less than the playback-time; and

determining an amount of time the frame arrived early if the arrival-time is less than the playback-time; and

altering the depth of the multimedia buffer system if the frame arrived early.

24. (Original) The method of Claim 23, further comprising the steps of:

providing an early-counter representing an amount of frames arriving early;

prior to performing the step of altering the depth of the multimedia buffer system, determining whether the early-counter exceeds a predetermined value; and

performing said step of altering the depth of the multimedia buffer system if the early-counter exceeds the predetermined value.

25. (Original) The method of Claim 23, further comprising the step of:

determining an amount of frames stored in the multimedia buffer system.

26. (Original) The method of Claim 25, wherein the depth of the multimedia buffer system is decreased by an amount dependent on the amount of frames stored in the multimedia buffer system.

27. (Original) The method of Claim 23, further comprising the steps of:

prior to performing the step of altering the depth of the multimedia buffer system, determining whether the multimedia buffer system is at a minimum depth; and

performing the step of altering the depth of the multimedia buffer system if said system is not at the minimum depth.

28. (New) A computer program for altering a depth of a buffer, the computer program operable to:

receive a frame of an input signal at an arrival-time, the frame having a timestamp indicating a playback-time;

determine whether the frame arrived on schedule, the frame arriving on schedule if the arrival-time matches the playback-time;

determine an amount of time between the arrival-time and the playback-time if the frame did not arrive on schedule; and

altering the depth of the buffer if the frame did not arrive on schedule.

29. (New) The computer program of Claim 28, wherein the computer program is further operable to determine the amount of time by determining an amount of time the frame arrived late based on an amount of time the arrival-time exceeds the playback-time.

30. (New) The computer program of Claim 29, further operable to alter the depth of the buffer by increasing the depth by a maximum amount of time which a frame within a set arrived late.

31. (New) The computer program of Claim 30, wherein the length of the set is variable.

32. (New) The computer program of Claim 28, wherein the computer program is further operable to adjust a late count if the arrival-time exceeds the playback-time and wherein the computer program is further operable to alter the depth by:

determining whether the late count exceeds a predetermined value; and

altering the depth of the buffer if the late count exceeds the predetermined value.

33. (New) The computer program of Claim 28, wherein the computer program is operable to alter the depth by:

determining whether the buffer is at a maximum depth; and

altering the depth of the buffer if the depth is less than the maximum depth.

34. (New) The computer program of Claim 28, wherein the computer program is operable to determine an amount of time by determining an amount of time the frame arrived early based on an amount of time the playback-time exceeds the arrival-time.

35. (New) The computer program of Claim 34, wherein the computer program is further operable to adjust an early count if the playback-time exceeds the arrival-time and wherein the computer program is further operable to alter the depth by:

determining whether the early count exceeds a predetermined value; and

altering the depth of the buffer if the early count exceeds the predetermined value.

36. (New) The computer program of Claim 34, wherein the computer program is further operable to:

determine an amount of frames stored in the buffer.

37. (New) The computer program of Claim 36, wherein the computer program is further operable to decrease the depth of the buffer by an amount based on the amount of frames stored in the buffer.

38. (New) The computer program of Claim 34, wherein the computer program is further operable to alter the depth by:

determining whether the depth of the buffer is greater than a predetermined minimum; and

altering the depth of the buffer if the depth is greater than the predetermined minimum.

39. (New) A system for increasing a depth of a buffer, the system comprising:

means for receiving a frame of an input signal at an arrival-time, the frame having a timestamp indicating a playback-time;

means for determining whether the frame arrived late, the frame arriving late if the arrival-time is greater than the playback-time;

means for maintaining a late count representing a number of frames arriving late;

means for determining whether the late-counter exceeds a predetermined value; and

means for altering the depth of the buffer if the frame arrived late and the late-counter exceeds the predetermined value.

40. (New) A system for decreasing a depth of a buffer, the system comprising:

means for receiving a frame of an input signal at an arrival-time, the frame having a timestamp indicating a playback-time;

means for determining whether the frame arrived early, the frame arriving early if the arrival-time is less than the playback-time;

means for maintaining an early count representing the number of frames arriving early;

means for determining whether the early count exceeds a predetermined value; and

means for altering the depth of the buffer if the frame arrived early and the early count exceeds the predetermined value.
